

What is Your Land Worth?

Determining the fair market value of your aggregate reserves or operation involves a number of factors.

By Mike Nowobilski

Case Study A: I recently received a call from a landowner who had been contacted by a mining company interested in purchasing his property for development. During our conversation, I asked whether the owner had an estimate of fair market value. In response he said he expected an offer of \$1,000,000 to \$1,500,000. However, he had no basis for his estimate. It seemed that the amount appeared sufficiently large to him. \$500,000 (or less) may represent a great offer. Hopefully, this owner makes an informed decision.

Case Study B: A company offered to lease a mineral property for \$0.75 per ton. The landowner would not consider entering into a mineral lease. However, he did offer to sell the property for approximately \$2,500 per acre. As this was equivalent to approximately \$0.05 per ton, the company agreed to the owner's terms and proceeded to close as soon as possible. Both parties were happy, but the owner could have received much more.

These two cases — true cases — illustrate the importance of properly evaluating and determining the sales price, typically described in terms of dollars per acre. For example, I do not know enough about the first case to comment, but in the second instance the owner left as much as \$1,000,000 on the table.

Financial considerations tend to dominate decisions and the negotiations between the landowner and the producer. A landowner's first decision is often whether he should sell, or lease his property. A sale of the property offers several advantages to the current owner. If he decides to sell, he must determine price. He does not want to sell too cheaply. Operators tend to focus primarily on the costs of securing the mineral and mining rights. Accordingly, the determination of the fair market value of a mineral property is the primary focus of this article. However, we'll begin by assessing some of the advantages and disadvantages of pursuing a property sale versus mineral lease from the perspective of both the landowner as well as the producer.

Landowner's perspective

A property sale offers the landowner several advantages as compared to entering into a mineral lease. One of the most obvious advantages associated with a property sale is the immediate lump sum cash payment that the landowner is free to spend or invest. By contrast, royalty payments may not begin for a number of years, and often continue for decades. Although this tends to be the primary deciding factor for many owners, there are several other factors that should be considered.

Perhaps equally important from an owner's perspective, a property sale is the "no risk" alternative. That is, it significantly lowers the owner's risk profile. Examples of eliminated risk include:

- Royalty income

is potentially risky. Even if the total income stream projected to be derived under a lease agreement appears greater, associated risks need to be considered. Royalty income could be terminated if the quarry, or mine, were idled and/or closed due to a downturn in the market. Similarly, operations could cease if the mineral deposit's physical characteristics deteriorated to the point of being uneconomical, or due to premature depletion of the deposit. A property sale transfers this risk to the operator ("new property owner"). Additionally, a sale eliminates the potential future contractual disputes that could impact the amount of future royalty payments received.

- Property ownership, especially of a mine or quarry site, is potentially risky. Although it is common for well drafted mineral leases to contain liability protection for the landowner, including liability insurance requirements, serious accidents and unforeseen events do happen. Sources of potential liabilities include worker injuries, drownings, etc. Furthermore, mining operations may result in environmental or reclamation issues.

In addition to the virtual elimination of ownership risks cited above, a property sale often provides the landowner with significant tax treatment advantages.

Operator's perspective

Similar to the landowner, producers typically focus on the financial aspects of the purchase option as compared to securing a leasehold interest. A property purchase does often require a significant up front cash outlay, but there are several advantages that should be considered during the decision-making process. The advantages typically associated with the ownership of the mineral property

FIGURE 1

Sales and Royalty Income Forecast

YEAR	ANNUAL SALES (TONS)	ROYALTY RATE (\$/TON)	ROYALTY INCOME \$
1	200,000	\$0.50	\$100,000
2	210,000	\$0.50	105,000
3	220,500	\$0.50	110,250
4	231,525	\$0.50	115,763
5	243,101	\$0.50	121,551
6	255,256	\$0.50	127,628
7	268,019	\$0.50	134,010
8	281,420	\$0.50	140,710
9	295,491	\$0.50	147,746
10	310,266	\$0.50	155,133
Total	2,515,579		\$1,257,789

include the following:

- Reduces cash operating expenses due to the elimination of earned royalty expenses. Sometimes this is a significant savings and a competitive advantage;
- Eliminates potentially significant advance royalty or annual minimums that may be payable for several years before mining commences. This obligation can continue for years;
- Protects the investment in the quarry and plant. It eliminates misunderstandings that often result between a lessor (landowner) and lessee (producer) under a long-term mineral lease; and
- Provides flexibility with respect to mining plans and reclamation plans.

Obviously the sale/purchase of a mineral property may offer significant advantages to both the owner and producer. So how do we determine fair market value?

Determining fair market value

What is fair market value? Fair market value is defined as the "most probable" price that a property should bring in a competitive and open market between a buyer and seller who are each acting prudently and knowledgeably. The price should not be affected by special or creative financing or sales concessions granted by either of the parties.

How is fair market value determined? Many are familiar with the use of the sales comparison approach (comps). Comps are commonly used when selling houses, offices, agricultural property, or other fairly liquid real estate. However, comps are not typically used for determining the fair market value of mineral properties. The most important reason comps are not used is that individual properties tend to be unique. Additionally, comps are not readily available as transactions are relatively infrequent and specific sale prices are confidential.

Determining the fair market value of a specific mineral property is typically done using what is referred to as the royalty income approach. As the name suggests, the basis for determining a property's value is the projected royalty income that would be derived under a mineral lease. For example, if a mining company were expected to mine 250,000 tons per

year and the fair royalty rate were \$0.50 per ton, the projected annual royalty income would be \$125,000.

Projecting the potential royalty income stream that would result from the development of a tract of land requires a careful assessment of several of the drivers discussed in a previous article (see "Mineral Leases: Royalty Rates Only Part of the Story," *AggMan*, June 2002). The first step is developing a rea-

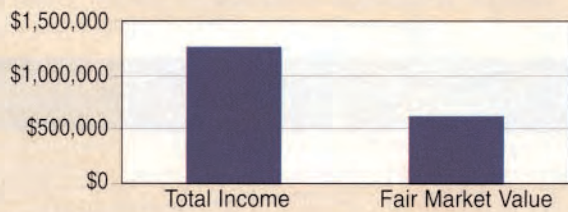
Factors such as the competitiveness of the deposit, commodity pricing, demand and market forces determine part of your operation's value.



sonable forecast of annual sales volumes and sales prices. The primary drivers that determine this forecast include:

- *Mineral's physical characteristics* — Type of mineral, extent of the deposit (tons), deposit quality, depth of overburden, mining costs, and processing requirements.
- *Sales and market data* — Commodity pricing (\$ per ton) and market demand for the finished product. Typically the historical sales

FIGURE 2
Royalty Income vs. Fair Market Value



volumes and prices are considered as well as future demand forecasts.

- *Mine design* — Mine design and the associated level of capitalization determines annual production and sales capacities of a mine, or quarry. This may or may not be equal to the level of demand. In some instances, the operation may operate below capacity due to sales limitations. In others, capacity may not fill available sales opportunities.

In addition to developing the sales forecast, the applicable market royalty rates need to be estimated. These rates are determined, in part, on commodity pricing, the competitiveness of the deposit, demand, and market forces.

After the sales forecast has been completed and applicable royalty rates estimated, the associated royalty income stream can be determined. Figure 1 illustrates the methodology for a hypothetical mineral property that is

forecast to be depleted in 10 years.

The hypothetical royalty income forecast presented in Figure 1 totals \$1,258,000. However, the mineral property's owner should not expect to receive this amount from the producer. Typically, the fair market value is considerably less than this amount. Why? The reduction is due to the application of a financial analysis technique called discounted cash flow analysis. In simple terms this means that a ra-

tional person would be willing to pay more for a note providing for the receipt of a cash payment of \$100,000 in one year versus an identical amount payable in 10 years. If nothing else, the earlier payment could be invested in interest bearing securities (such as a CD). For example, if the \$100,000 is invested at 5 percent interest for a period of 10 years, the balance would be worth approximately \$250,000.

Selecting the discount rate takes into account several financial factors as well as adjusting for risks associated with the project. Figure 2 illustrates the fair market value is only about half of the total royalty being projected. However, considering that the owners get the cash payment today, can reinvest the proceeds, and may shift any risks associated with the property and the royalty income forecast to the operator, the reasoning for the discount may be apparent.

Both case studies presented at the beginning of this article illustrate the benefits of utilizing the principles of this article to determine the fair market value of a mineral property. Following a thorough analysis that considers the deposit's characteristics, the market, applicable royalty rates, and the appropriate discount rate, a reasonable and defensible estimate of value can be derived. For Case A's owner this will help him arrive at a fair and defensible price before beginning negotiations. Unfortunately for Case B's owner, the additional \$1,000,000 is a lost opportunity. ■

■ **Mike Nowobilski** is president of Mid-America Energy & Mining Services, Inc. He can be reached at 618-624-0155, or nowobilski@midam-inc.com.

